

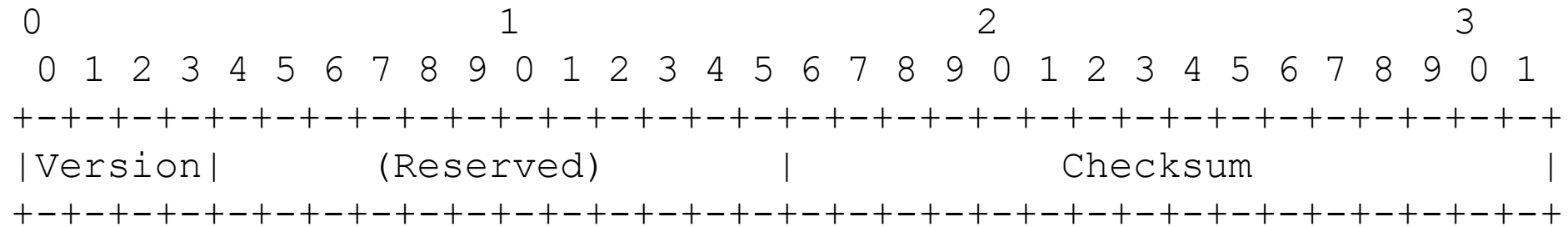
ICMP Extension Header Length Field

draft-ietf-intarea-icmp-exten-hdr-len-00

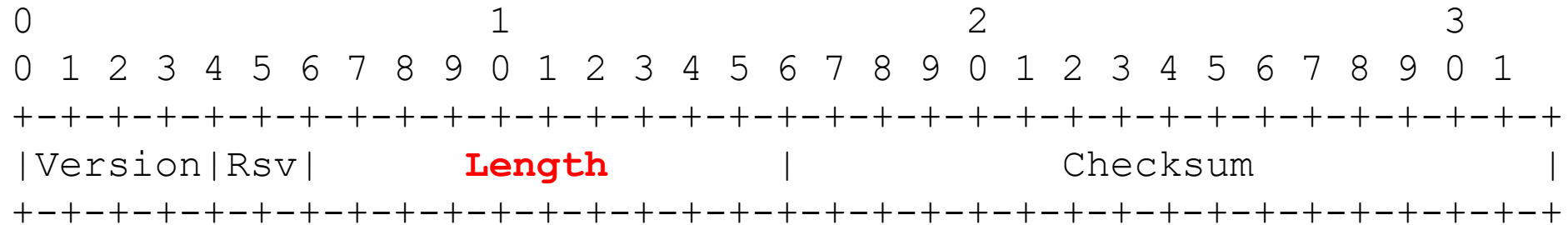
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Goal

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Current ICMP Extension Header



Proposed ICMP Extension Header

Length is total length of all options contained in the ICMP Extension Structure. It does not include the length of the Extension Header. The length is measured in bytes. Legacy implementations set this field to 0.

Why?

ICMP Message: RFC 792, RFC 4443

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IP Header
ICMP Message
Original Data Field

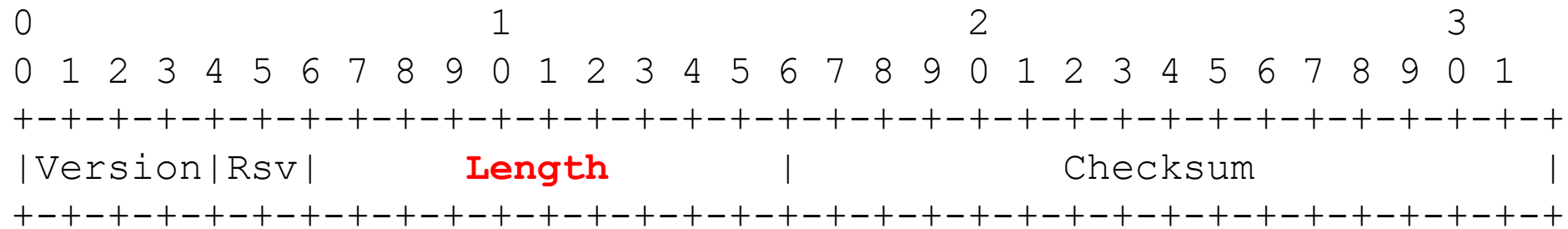
- The ICMP Message does not indicate the Original Data Field length
- Therefore, the Original Data Field must be the last item in the packet
- If it were not the last item, there would be no way to tell where the next item begins

ICMP Message: RFC 4884

IP Header
ICMP Message (length of Original Data Field)
Original Data Field
Extension Structure

- The Extension Structure does not include a length field
- So now, the Extension Structure must be the last item in the packet

The Solution



ICMP Extension Header With Length Field

Length is total length of all options contained in the ICMP Extension Structure. It does not include the length of the Extension Header. The length is measured in bytes. Legacy implementations set this field to 0.

Next Steps

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- WG Last Call